EXPANDABLE SELF-ROUTE MULTI-MEMORY PACKET SWITCH WITH A CONFIGURABLE MULTICAST MECHANISM

Abstract

Data transmission system comprising a plurality of Local Area
5   Networks (LANs) (10-1 to 10-4) interconnected by a hub (12)
including the same plurality of LAN adapters (16-1 to 16-4)
respectively connected to the LANs and a packet switch (14)
comprising at least a packet switch module interconnecting all
LAN adapters wherein a packet transmitted by any adapter to the
10   packet switch includes a header containing at least the address
of the adapter to which the packet is forwarded. The system
comprises a memory block at each crosspoint of the switch
module including memory control means for determining from the
header of the received data packet whether the packet is to be
15   forwarded to the output port associated with the crosspoint and
a data memory unit for storing at least the data packet into
the data memory unit before sending it to the output port. The
memory control means analyzes all the bytes following the
header when it includes a specific configuration indicating
20   that the packet is a multicast address packet preceding a
multicast frame in order to determine whether the packets of the
multicast frame are to be forwarded to the output port.

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